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(The present total head of Meat animals in the World – Development of Meat production in the World – Trends in Meat production).

A Volume of 324 pages with Statistical Appendices and Diagrams.

PRICE: **30 lire.**

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ROME — PRINTING OFFICE 'CARLO COLOMBO.'

CHRONICLE OF THE INTERNATIONAL INSTITUTE OF AGRICULTURE

The radio communiques of the International Institute of Agriculture will be transmitted between 2.45 and 2.52 p. m. on the following days: Thursday, English ***and*** German; ***Friday,*** Spanish; ***Tuesday,*** Italian ***and*** French.

They will be broadcast from Rome II (245.5 m.) and Rome 2 RO 4 (25.4 m.).

The hour of broadcasts is in Central European Time, which is one hour ahead of Greenwich Mean Time, and 6 hours ahead of Eastern Standard Time in the United States.

International congresses of agricultural interest. — International meetings of agricultural interest to be held in 1939 include the following:

1. – *VIIIth International Congress on Tropical and Subtropical Agriculture* (Tripoli, March 13-17, 1939). — Under the auspices of the Royal Ministry for Italian Africa, the Congress is organized by the International Federation of Agricultural Experts (F. I. T. A.), Rome, in collaboration with the Royal Agrarian Institute for Italian Africa, Florence, and in agreement with the Scientific Association of Hot Countries, Paris. The Congress will be held during the XIIIth Tripoli Samples Fair.

The agenda includes six categories of questions: *Colonial policy; agricultural exploitation of tropical and subtropical countries; agrarian problems; economic problems; tropical and subtropical crops; campaigns against crop and livestock pests.*

Members of the Congress will be accorded railway reductions in the following countries: Germany, Great Britain, Belgium, France, Holland, Hungary, Italy, Lithuania, Norway, Poland, Portugal, Switzerland and Czecho-Slovakia. The Italian shipping lines are also granting reductions on the return trip between Italian ports and the Mediterranean ports touched by the "Italia", "Tirrenia" and "Adriatica" shipping companies.

Receptions, excursions and visits have been arranged in connection with the Congress, while optional excursions may be made at the conclusion of the meetings.

Application for membership must be made before February 10, 1939.

Further information may be obtained from the Congress Organization Bureau, F. I. T. A., Via Regina Elena, 86, Rome.

2. – *IInd International Grape and Grape Juice Congress* (Rabat, March 14-18, 1939). — This Congress was originally fixed for April 19-23, 1938, but was postponed and will now be held from March 14-18, 1939.

Members will be granted reductions on railway fares as far as the ports and may also take part in excursions according to the route chosen. They may also prolong their stay in Morocco and make other excursions.

Applications for membership may be addressed to the Agence "Duchemin-Exprinter", 26 Avenue de l'Opéra, Paris, or to Monsieur Gilot, Secretary General of the Congress, Direction des Affaires Economiques, Rabat, but must be sent in before February 15 next.

3. – *XVIIth International Congress of Agriculture* (Dresden, June 6-12, 1939). — The programme includes a number of subjects of topical interest, divided into 9 sections as follows: *agrarian policy and rural economy; agricultural instruction and propaganda; agricultural co-operation; vegetal production; viticulture and cultivation of fruit trees and special crops; livestock production; agricultural industries; rural life and women's work; agrarian sciences.* Each section will deal with several subjects.

Receptions, entertainments, excursions, circular tours and visits have been arranged in connection with the Congress; study trips may also be made after the Congress.

Further information may be obtained from the General Organization Committee, Hafenplatz, 4, Berlin S. W. 11.

4. – *VIIth International Poultry Congress* (Cleveland, Ohio, July 28 to August 7, 1939). — Like the previous Congresses, the VIIth in the series will deal with all branches of poultry raising and allied industries. More than 60 countries are expected to take part officially.

5. – *IVth International Congress on Animal Husbandry* (Zurich, August 8-11, 1939). — Twenty-one questions, divided into six sections, will be discussed, dealing with every species of domestic animal. Excursions for the members of the Congress to the Swiss animal raising districts and alpine farms have been arranged to follow the meeting. Members will also be able to visit the Swiss National Exhibition and the Xth Agricultural Exhibition at Zurich. The preliminary programme of the Congress has already been published. Further information may be obtained from the General Secretariat of the Congress, Zug, Switzerland.

PUBLICATIONS OF THE INTERNATIONAL INSTITUTE OF AGRICULTURE

JUST OUT:—

WORLD PRODUCTION IN MEAT

(XII + 296 pages, 8vo., with Diagrams and Statistical Tables).

PRICE: **30 Lire.**

The study of the meat problem, which was undertaken in view of continuing the series of *Monographs on the principal agricultural products on the world market*, resulted in 1936 in the publication of a volume on the " International Trade in Meat " (XII + 424 pages, 8vo. PRICE: **25 Lire**).

The monograph which has now appeared — as No. 3 of the Series — represents the second part of the publication on meat.

The volume consists of three parts: I. The present total head of meat animals in the world; II. Development of meat production in the world; III. Trends in meat production.

INTERNATIONAL BULLETIN
OF PLANT PROTECTION

1939 No. 2

DISCOVERIES AND CURRENT EVENTS *

Germany: Further Records of the Colorado Beetle (*Leptinotarsa decemlineata*) in 1938 †

During the period from July 1 to November 13, 1938 the Colorado beetle was reported for the first time in the following 9 administrative areas: Rheinisch-Bergischer Kreis (2 communes), Borken, Crailsheim, Giessen, Hall, Marbach, Marburg, Münsingen, and Rhein-Wupperkreis (each one commune).

For reports made previously in other administrative areas of Germany, see this *Bulletin*, 1938, No. 8, p. 169; No. 10, p. 213; No. 11, p. 241 and 1939, No. 1, p. 1.

Australia: Notes on Plant Diseases Recorded in New South Wales for the Year Ending 30th June, 1938 §

CEREALS AND FIELD CROPS.

Wheat crops were relatively free from disease. Flag Smut (*Urocystis tritici*) although serious on susceptible varieties is now becoming of less consequence as resistant varieties are so widely grown. Pseudo-black chaff was noted in several varieties but was of little importance. Ergot (*Claviceps paspali*) was again widespread in paspalum in coastal areas. Kernel smut (*Sphacelotheca sorghi*) caused losses in broom millet crops. Potato crops in coastal areas suffered severely from an outbreak of late blight (*Phytophthora infestans*). Less serious infections were recorded in the case of brown rot (*Bacterium solanacearum*), early blight (*Alternaria solani*) and tomato spotted wilt (virus) in potatoes. Potato leaf roll is still the most common virus disease in this crop.

It was estimated that maize yields were reduced by approximately 12 per cent as a result of root, stalk and cob rots (*Gibberella saubinetii, G. fujikuroi* var. *subglutinans* and *G. moniliformis*). American maize smut (*Ustilago zeae*)

* Under this and the next heading the countries are arranged in French alphabetical order.

† Communication from the Biologische Reichsanstalt für Land- und Forstwirschaft, Berlin-Dahlem, the official correspondent of the Institute.

§ Communication from the official correspondent of the Institute, Dr. R. J. NOBLE, Biologist, Department of Agriculture, Sydney, New South Wales, Australia.

was recorded in a commercial area of maize. The crop was destroyed by fire and the area subjected to quarantine regulations with a view to checking spread of the disease.

Major losses in pea crops resulted from *Fusarium* and *Rhizoctonia* root rots. Lack of root nodules was associated with a crop failure in one area. Leaf mildew (*Cladosporium fulvum*) was again the most serious disease of glasshouse tomato crops. Spotted wilt (virus) was the most serious disease of tomatoes in the outdoor metropolitan crops. Canker (*Aplanobacter michiganense*) was widespread in tomato crops generally.

Sclerotium rolfsii and *Sclerotinia libertiana* affected many vegetable and ornamental crops; *S. rolfsii* was recorded on onions for the first time in this State.

Fruit crops.

Black spot (*Phoma citricarpa*) seriously affected main crop Valencia oranges in coastal areas. This crop also was subject to unusual mould attack (*Penicillium* spp.) which also was recorded in a heavy second crop of oranges which set after breaking of the 1936-37 dry period. *Septoria depressa* spot of citrus was recorded from inland irrigation areas.

Powdery mildew (*Oidium* sp.) of grapes was unusually prevalent during a period of high humidity; shedding of berries and breakdown conditions in grapes appeared to be associated with low temperature and low soil moisture conditions respectively.

Black spot (*Venturia inaequalis*) was less serious than usual on apples. Freckle (*Cladosporium carpophilum*) occurred for the first time in many years on early maturing peach varieties; it was severe in untreated areas of later types. Rust (*Puccinia pruni-spinosae*) caused losses in coastal peaches and on unsprayed canning varieties of inland irrigation areas.

A dieback condition in cherries caused extensive losses. Banana bunchy top (virus) is kept under control as a result of constant vigilance. " Rubbery " bananas of hard unpalatable texture were associated apparently with production areas of forest rather than " scrub " soils and with the incidence of low temperatures during later stages of development. Leaf Spot (*Cercospora musae*) followed incidence of prolonged summer rains in north coastal areas and resulted in severe defoliation, with consequent loss of size and quality in bananas. A pitted condition superficially resembling anthracnose developed extensively in bananas and appeared to be associated with chilling of winter grown fruit.

Other crops.

Ornamentals grown for market were subjected to serious losses by disease, e.g., Nematode (*Heterodera marioni*), Fusarium root rot and Bud rot (*Sporotrichum poae*) on carnations, Root rot (*Fusarium conglutinans callistephi*) on asters, Tomato spotted wilt (virus) and Crown rot (*Phytophthora cryptogea*) on Iceland poppies (*Papaver nudicaule*) and Scab (*Sphaceloma violae*) on violets.

Eritrea: *Locusta migratoria migratorioides* *

During the month of November 1938 many hoppers of the African migratory locust (*Locusta migratoria migratorioides*) were observed, chiefly in the 4th and 5th stages.

The starting point of the invasions was changed from the low-lying western plains to certain zones of the Tigrai. This locust is apparently extremely resistant to the cold night winds and goes to the high plateaux only during the warmest hours of the day.

It is said that an outbreak area has been found in Alalà, along the Gasc river.

Other hopper bands of less importance have been observed on the Rore, in the Hamasien territory and in the Acchelè Guzai.

The young adults have not yet moved in any definite direction; it has been noticed that a swarm coming from a given point may hover over a region and finally return to their starting-point. Such swarms, however, usually make for districts where fresh pasturage or standing crops may be found.

A swarm from Hamasien hovered over Ghinda and then descended towards the Damas plain whence, some days later, it returned to the plains at medium altitude, where it still remains. In the middle of the month there was a similar occurrence in Dancalia, since when no further reports have been received. A supervision and control service has been established along the Gasc river, baits being chiefly used and – in exceptional cases – flame-throwers. Much damage to crops has been averted by the prompt action of the staff engaged in the campaign.

Mozambique: Locusts †

During September 1938 no movements of locusts were registered in any of the three provinces of the Colony.

Southern Rhodesia: Locust Invasion, 1932-1938 §

Monthly Report No. 71. October, 1938.

During October numerous flying swarms of the red locust (*Nomadacris septemfasciata*, Serv.) have been reported. Most districts in the Colony have reported swarms except those in the extreme south and north west. Fifteen districts in Mashonaland have been invaded, namely: Charter, Chilimanzi, Gutu, Hartley, Inyanga, Lomagundi, Makoni, Mrewa, Marandellas, Mazoe, Melsetter,

* Communication from Dr. LUIGI M. BOLOGNA, Director of the Agricultural Office Asmara, trasmitted to the Institute by the Government of the Colony.

† Communication from M. ALBERTO COUTINHO SARAIVA, Director of the Section of Entomology Lourenço Marques, Mozambique.

§ Communication from Mr. J. K. CHORLEY, Acting Chief Entomologist, Agricultural Laboratory, Department of Agriculture, Salisbury, Southern Rhodesia.

Ndanga, Salisbury, Umtali, and Victoria, and seven districts in Matabeleland, namely: Bulalima-Mangwe, Gwanda, Gwelo, Insiza, Matobo, Nyamandhlovu, and Sebungwe.

The eastern districts have been heavily invaded by swarms from Portuguese East Africa.

Considerable damage has been caused to early grazing and some wheat crops have suffered.

New spring foliage on indigenous trees has been badly damaged.

The direction of flight has been variable.

Switzerland: Outbreak of *Laspeyresia* (*Cydia*) *molesta* and *Ceresa bubalus* in the Country *

The oriental peach moth (*Laspeyresia* [*Cydia*] *molesta* Busck), which is found throughout north Italy and, in France, in the Alpes-Maritimes and the Var, was discovered in Switzerland in 1937, in several localities of Ticino and in an orchard near Lausanne. It has probably penetrated into Ticino by natural migration from the neighbouring Italian districts which have been infested since 1934. At Lausanne, the insect was introduced by trade movements.

In 1938, the oriental peach moth was rare in Ticino, and the Lausanne focus did not spread; only a single larva was found there.

In the course of September 1938, the American membracid *Ceresa bubalus* Fab. was discovered in several orchards in central Valais, especially at Saxon and Sion where considerable damage was done on apple and pear trees. It would seem that the introduction was earlier than 1934.

LEGISLATIVE AND ADMINISTRATIVE MEASURES

Germany. — A Decree of August 25, 1938 on the use of ethylene oxide combines in a single text the provisions of the Order of February 26, 1932 and the amendments of this Order introduced by the Decrees of October 10, 1934, October 19, 1935 and May 20, 1936 [see this *Bulletin*, 1932, No. 6, p. 99; 1935, No. 4, p. 85; 1936, No. 2, p. 31, and No. 8, p. 173].

Additions have been made to these provisions, rendering them clearer and more effective.

The precautionary measures intended to prevent the occurrence of fires and explosions have been made more stringent. It is enacted that on premises that have to be disinfected by means of ethylene oxide and on neighbouring premises, stoves are to be put out 24 hours at least before beginning fumigation.

* Communication from the official correspondent of the Institute, Dr. H. FAES, Director of the Federal Experiment Station of Vine and Fruit Trees, Lausanne, Switzerland.

The use of ethylene oxide is prohibited in old houses where, owing to the condition of the structure, the rooms which are to be disinfected cannot be hermetically sealed.

Fumigation of buildings that are not isolated and of premises in inhabited buildings must be begun after 1 p. m. on the day appointed.

Permission to install movable ethylene oxide disinfection chambers will be given only if the chambers in question are to be installed inside uninhabited buildings or in the open air at a distance of at least 5 m. from any inhabited dwelling. Their construction must allow of effective heating and ventilation invloving no risk to the neighbourhood. (*Amtliche Pflanzenschutzbestimmungen*, Berlin, 1. Oktober 1938, Bd. X, Nr. 7, S. 172-174).

*** On August 9, 1938 supplementary instructions were issued for the application of the Decree of July 1, 1938 relating to control of the musk rat [*Fiber zibeticus*] [see this *Bulletin*, 1938, No. 12, p. 270]. (*Ibid.*, S. 175-176).

Germany (**Brunswick**). — By Decree of July 4, 1938 relative to the destruction of yellow weed (*Galinsoga parviflora*), the control of this plant is made compulsory for all proprietors, occupants and holders of any land.

The plants of *G. parviflora* must be uprooted and destroyed on the spot by burning or by digging well into the ground. Any other system of destruction is forbidden, especially that of leaving the uprooted plants in the fields or roads, or throwing them into ditches, streams, on to manure heaps, etc.

This weed should be destroyed every year on all fields before July 1, exception being made for cereal fields, where operations will be carried out immediately after harvesting.

Plants which reappear after this preliminary clearing operation must be destroyed as soon as seen and before flowers are formed. They may be destroyed by any means which ensure definite killing off of growth.

Destruction operations will be under the control of the Plant Protection Service, police authorities and mayors. The last-named may set up Committees of two or three members for this purpose. The first inspection will take place after July 1 and at the latest July 15; further inspections will be made at intervals of about four weeks. (*Amtliche Pflanzenschutzbestimmungen*, Berlin, 1. August 1938, Bd. X, Nr. 6, S. 127-128).

Germany (**Prussia**). — By Decree of October 31, 1938 on the virus diseases of potatoes, planting of peach and apricot trees is prohibited in certain districts in Pomerania.

Any peach or apricot tree found to be withering and with no promise of fruit must be removed before March 15.

Peach and apricot trees are to be treated, during mild dry days between December and February, with an application of carbolineum.

Peach and apricot trees must be watched for the appearance of the aphis *Myzodes* (*Myzus*) *persicae*. Trees which, in spite of the treatment, are found to be infested by aphides, must be sprayed, immediately before or after flowering

with a preparation recognized as effective against aphides by the Central Plant Protection Service.

Sprayings must be made in accordance with the instructions of Plant Protection Service.

The administrative authority may arrange for spraying to be done directly by the Plant Protection Service at the expense of the person concerned who is obliged to render assistance. (*Amtliche Pflanzenschutzbestimmungen*, Berlin, 1. Dezember 1938, Bd. X, Nr. 8, S. 221-222).

Argentine Republic. — By Decree No. 13.800 October 5, 1938, article 8 of the Decree No. 116.277 of October 9, 1937 is amended. The article now reads as follows: ' Certified seed potatoes imported into Argentina must be transported in the packing material in which they entered the country; a new label shall be affixed with the words: ' Semilla certificada de papa – Importada '.

' The new label will be affixed at the National Potato Market, if the goods enter by the port of Buenos Aires, and by the staff of the Plant Health Department, responsible for plant inspection at ports, if they enter by the port of Rio Gallegos '. (*Boletin Oficial de la República Argentina*, Buenos Aires, 31 de octubre de 1939, año XLVI, núm. 13.280, pág. 14.714).

Australia (New South Wales) * — A Proclamation of August 31, 1938 indicates the plants declared to be noxious plants in the different portions of the State.

Australia (Queensland). — By Notification of October 19, 1938, Indian Hemp (*Cannabis sativa*), Opium Poppy (*Papaver somniferum*), and Coca Leaf (*Erythroxylum coca*) have been declared to be noxious weeds or plants in the State of Queensland. (*Queensland Government Gazette*, Brisbane, 22nd October, 1938, Vol. CLI, No. 94, p. 1706).

Brazil. — By Decree-Law No. 780 of October 12, 1938, an Experiment Station of Insecticidal Plants (Estação Experimental de Plantas Entomotóxicas), placed under the Ministry of Agriculture, was been set up. This Station is to undertake study, experimental trials and propagation of plants with insecticidal properties, especially those belonging to the genus *Lonchocarpus* (timbós), with a view to their utilization in control measures against crop pests. (*Diário Oficial*, Secção I, [Rio de Janeiro], 14 de outubro de 1938, anno LXXVII, n. 238, pag. 20665).

Belgian Congo. — Ordinance No. 59/Agri, of April 19, 1938 relative to the cultivation, purchase of and trade in cotton, lays down, *inter alia*, that the Chief of Province is authorized to prohibit sowing cottonseed other than that supplied, or the quality of which has been verified by himself.

* Communication from the Prime Minister's Department, Canberra, Australia to the International Institute of Agriculture.

The introduction of cottonseed into a province by private individuals is prohibited, unless previously authorized by the Chief of Province.

Whosoever cultivates or causes cotton to be cultivated is required, on the lands in question, to:—

(1) Top or destroy or have topped or destroyed according to the methods and at the times indicated by the Chief of Province, the plants, bolls and plant waste affected with diseases or pests which by the latter may specify.

(2) Uproot and burn cultivated cotton plants, collect and burn the bolls; these operations should be carried out immediately after harvesting and at the latest two months before the date determined for sowing.

The Chief of Province, on the proposal of the Chief of the Provincial Service of Agriculture and Colonization or of a qualified expert, and by decision posted up in the chief towns of the zones in question, may prohibit cotton cultivation in any given region for a whole season, with a view to eliminating any disease existing in this region or to checking the propagation of a disease infesting another zone. This prohibition may be renewed from year to year if necessary.

The Chief of Province, may also as a preventive measure, order the destruction of healthy plantations in an area open to cotton cultivation; against compensation representing the value of the plantation at the time of destruction, the amount being decided by the Chief of Province.

The Territorial Administrator, on the proposal of the Chief of the Provincial Service of Agriculture and Colonization or of a qualified specialist, may, with a view to preventing the spread of infestation, order immediate destruction by burning of cotton plants or plants in the field and of seed or harvested but unginned cotton affected by diseases or pests which it is not possible to control effectively by any other means.

If considered justified, the Chief of Province may in the above-mentioned cases grant to the party entitled a compensation equivalent at most to the value at the time of destruction of the plants, seeds and cotton burnt, and in the condition at the time when destruction was ordered.

The officers of or acting for the Territorial Service and the Agricultural Service may, with a view to studying the condition of cotton crops, at any time, even at night, inspect, fields planted with cotton whoever the proprietors.

All Territorial Administrators are required to inform without delay the Administrators of adjoining zones of the presence of any cotton diseases caused by insects or fungi, which have been officially reported to him by the Chief of the Provincial Service of Agriculture and Colonization or by a qualified expert.

All holders of unginned cotton are obliged to declare the quantities of this cotton and where stored.

This cotton should be ginned before the April 1 following for the districts south of the Equator, and before November 1 for the districts north of the Equator. After this date, the Chief of Province, on the proposal of an officer of the Service of Agriculture and Colonization, may order the burning of unginned cotton.

If there is a threat of disease, the time allowed before ginning may be reduced by the Chief of Province.

Besides withdrawal of the buying licence granted by the Territorial Administrator, penalties may be inflicted on whosoever has:—

(*a*) Purchased unginned cotton grown in the Colony by natives of the Congo or other African countries elsewhere than at the cotton markets or at the cotton-gins;

(*b*) Outside the above specified localities or outside the period fixed for the buying season, offered or caused to be offered to natives to buy their cotton;

(*c*) Before the buying season, offered or agreed to store native cotton and to practise the system of advanced payments on the crop.

All the seeds from cotton ginned by hand should be destroyed by fire or by any other means authorized by the Chief of Province. This operation will be carried out from day to day and, at the latest, within 24 hours following ginning, by and under the responsibility of the proprietor or lessee of the gins. The sale and purchase of these seeds are prohibited under penalty of a fine of from 100 to 1000 francs and confiscation of the seed.

Unless authorized by the Chief of Province, it is prohibited to transport or have transported unginned cotton bought from the natives from one zone to another.

The Chief of Province may order that the seed of cotton treated at the cotton-gin and requisitioned by him or by the Territorial Administrator, shall be disinfected within the period and in the manner determined by the said Chief of Province.

The Chief of Province may also authorize the export of these seeds outside the limits of the zone of operation of the cotton gin or the province. (*Bulletin Administratif du Congo belge*, Léopoldville, 25 avril 1938, 27me année, nº 8, p. 296-318).

France. — Two Decrees of October 28, 1938 modify the Decree of October 13, 1934 relative to the award of grants to the victims of agricultural disasters (hurricanes, floods, frosts or hail). (*Bulletin de l'Office de Renseignements agricoles*, Paris, 15 novembre 1938, année 1938, nº 22, p. 582-583).

Italy. — Royal Decree-Law No. 1622 of September 5, 1938, made the following provisions:—

A credit of 1,500,000 lire is granted to the Ministry of Agriculture and Forests for each financial year from 1938-39 to 1941-42, for the payment to citrus fruit growers of a contribution towards any expense they shall incur in connection with the campaign against the 'mal secco' [*Deuterophoma tracheiphila*] in Sicily; and the reconstitution of plantations destroyed or infected during the seasons 1938-39 to 1941-42.

The maximum of 300,000 lire fixed by Royal Decree-Law No. 115 of January 18, 1937, which came into force under Law No. 576 of April 3, 1937 [see this *Bulletin*, 1937, No. 4, pp. 70-71, and No. 7, pp. 155, 156] for payment to

citrus fruit growers of a Government contribution towards the expenses incurred for the ' mal secco ' campaign in Sicily and the reconstitution of plantations destroyed or infected during the season 1935-36, has been raised to 450,000 lire.

The Ministry of Agriculture and Forests is authorized to contribute toward the expenses incurred by farmers for the campaign against scale insects and other animal and plant parasites of citrus trees and fruits during the seasons 1939-1948.

For this purpose the Ministry in its estimated expenditure has allocated a credit of 4 million lire for the financial year 1938-39 and further credits of 4.5 million lire for each of the financial years from 1939-40 to 1947-48.

The Ministry of Agriculture and Forests is further authorized to make grants:—

(*a*) Towards the expense reconstituting plantations of: peach trees destroyed or infested by ' moria '; pear and plum trees destroyed or infested by *Parlatoria*, almond trees destroyed or infested by root rot or ' verde secco ', and filbert trees destroyed or infested by ' verme del legno ', on condition that such reconstitution shall be effected subsequent to the issue of the present Decree and not later than the season 1939-40;

(*b*) Towards the expense of reconstituting chestnut plantations destroyed or infested by ink disease [*Phytophthora cambivora*], provided that it shall be carried out after the publication of the present Decree and not later than the season 1947-48;

(*c*) Towards the expenses of the campaign agaist animal and plant parasites of peach, apple, pear, chestnut, cherry, plum, apricot and almond trees and fruit, provided it is carried on after the issue of the present Decree and not later than the season 1947-48;

(*d*) To syndicates of fruit-growers set up in conformity with Law No. 897 of June 18, 1931 [see the *Bulletin*, 1931, No. 9, pp. 166-167] with object of ensuring the whole or partial payment of interest on loans that shall have been necessary for the campaign prescribed for the seasons 1938-39 and 1939-40, against animal and plant parasites of peach, apple, pear, apricot and almond trees and fruit;

(*e*) To syndicates for fruit-growing in provinces where the production of dried figs is of great importance, as contributions towards expenses incurred for the construction of plant for the disinfection of dried figs and the purchase of cases for the disinfection and conservation of the product on farms;

(*f*) Towards expenses incurred for the disinfection of dried figs after the issue of the present Decree and not later than the season 1947-48;

(*g*) Towards the expenses of organizing and launching syndicates for fruit-growing, established after 1936 in conformity with the Law No. 987 of June 18, 1931.

For the purpose of providing the amount required for the above-mentioned contributions the Ministry of Agriculture and Forests has allotted the following credits:—

(1) In respect of par. (*a*): 402,500 lire for each of the years 1938-39 and 1939-40;

(2) In respect of par. (*b*): 280,000 lire for each year from 1938-39 to 1947-48;

(3) In respect of par. (*c*): 2,955,000 lire for each year from 1938-39 to 1947-48;

(4) In respect of par (*d*): 455,000 lire for the years 1938-39 and 1939-40;

(5) In respect of par. (*e*): 210,000 lire for the year 1938-39;

(6) In respect of par. (*f*): 300,000 lire for each year from 1938-39 to 1947-48;

(7) In respect of par. (*g*): 820,000 lire for the year 1938-39.

The Minister of Agriculture and Forests is authorized to engage technical specialists in plant protection on yearly contracts. These will not form part of the permanent staff. (*Gazzetta Ufficiale del Regno d'Italia*, Roma, 24 ottobre 1938, anno 79°, n. 244, pp. 4426-4427).

*** Ministerial Decree of October 13, 1938 authorizes, subject to certain conditions, the shooting and capture of sparrows in the Muratella-Maccarese zone of Rome Province in order to protect crops. (*Ibid.*, 18 ottobre 1938, n. 239, p. 4352).

*** By Ministerial Decree of October 19, 1938, the territory of the commune of Giano dell'Umbria has been declared infested with grape phylloxera. (*Ibid.*, 12 novembre 1938, n. 258, p. 4661).

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Chapter IV. The more important insect pests and diseases found attacking economic plants:—

A. Coconut.
B. Bananas.
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